

nih record



ABOVE • Students from a local elementary school encounter a sheep's heart. See story on p. 12.

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Employees Rally Around Relief Efforts

Longtime NIH-Funded HIV/AIDS Research Suffers in Haiti Quake

By Carla Garnett

The catastrophic earthquake that struck Haiti's capital city on Jan. 12 dealt a serious blow to NIH research interests there. GHESKIO, which is a French acronym for the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections, was established in 1982 as the first institution in the world exclusively dedicated to fighting HIV/AIDS. The organization's founder and director, Dr. Jean Pape, is a longtime NIH grantee.

Early Reports Unimaginable

In a statement emailed to employees on Jan. 15, NIH director Dr. Francis Collins said, "The thoughts and prayers of all of us have been with the people suffering from the horrendous effects of Tuesday's earthquake in Haiti—those in the country and those with friends and family there. Haiti is part of the NIH family. We have 27 research projects



Annette Edwards (l) and Rachel N. West pack up supplies for Haiti relief.

SEE HAITI QUAKE, PAGE 6



Dr. John Rich gives WALS talk in Masur.

Intersection of Violence and Medicine

Where Interventions in the Lives of Young Black Men Can Make a Difference

By Valerie Lambros

On its face, it may not seem natural to treat urban violence as a medical concern. But Dr. John Rich, a professor and chair of the department of health management and policy at Drexel University's School of Public Health, made a compelling case for doing so during his recent Wednesday Afternoon Lecture Series appearance at Masur Auditorium.

SEE URBAN VIOLENCE, PAGE 4

Migraine in the Spotlight

STEP Forum Explores Headaches

By Belle Waring

Millions of Americans suffer from migraines and NIH wants to help. A panel of experts recently convened in Lister Hill auditorium for a STEP forum on the science and management of headaches.

"Right now, today, on average," said the University of California, San Francisco's Dr. Peter Goadsby, "around 1.1 million Americans have a migraine and are out there just trying to get on with life."

Migraine, the most common kind of headache, strikes up to 18 percent of women and 7 percent of men, as well as 8 percent of children/adolescents.

"However," Goadsby continued, "today we

SEE HEADACHE, PAGE 8



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briefs

Census 2010: Time to Be Counted

Starting in March 2010, all residential addresses in the United States will receive 2010 Census questionnaires. It is important that all persons residing in the U.S. at the time of the Census be counted—if you are not a citizen of the U.S. or if you are living here temporarily you should still complete the questionnaire.

The Census count determines the amount of dollars your local jurisdiction will get in funds from the federal and state governments for important programs and services. The funding is based on the total number of residents counted. The count also determines your local jurisdiction's representation in the state legislature and in the U.S. House of Representatives.

By federal law, the Census Bureau is not allowed to share any personal identifiable information about you with anyone, including federal agencies and law enforcement entities. Information collected by the Census Bureau is used for statistical purposes only. The 2010 Census form consists of only 10 simple questions.

The following are key dates:

March 2010—Census questionnaires are mailed or delivered to households.

Apr. 1—Census Day.

May-July 2010—Census workers visit households that have not returned the questionnaire.

December 2010—The Bureau of Census delivers population counts to the President of the U.S.

For more information, visit www.census.gov. For Montgomery County Census information and activities, visit www.montgomerycountymd.gov/census.

NIH Al-Anon Groups Welcome Addict Families

The Al-Anon Groups at NIH welcome any family members of individuals who are being detoxed and treated at the Clinical Center for drug abuse.

Al-Anon is an organization for families and friends of alcoholics and is not primarily for families of those who have addiction problems with harder drugs. However, the NIH program focuses on the individual, rather than the person in treatment, or the addiction. Simply put, its goal is to provide hope for loved ones of people in recovery.

There are two weekly group meetings that help in dealing with loved ones who have problems caused by addiction. Some of the members have decades in Al-Anon. Members feel the

program will be just as helpful for those dealing with narcotic addiction as for those dealing with alcoholics.

Meetings are free and confidential and take place in Bldg. 31, Rm. 1B63, Monday and Thursday at noon.

NIH Golf Association Seeks New Members

The NIH Golf Association (18-hole competitive coed league) is looking for new members for the 2010 season. It currently has 7 teams of up to 25+ players each and schedules 8 stroke play outings in the spring and summer. Stroke play is followed by up to 5 match play outings. All outings are mid-week at local courses in Virginia and Maryland and play is optional. The NIHGA caps the year off in October with an outing that includes golf/cart and dinner for all members and their guests. Prizes and trophies are awarded and handicaps are maintained from 0-40, so all golfers are welcome. For more information contact Howard Somers at somersh@mail.nlm.nih.gov; visit www.recgov.org/nihga/ for complete information on the upcoming schedule and other news.

NCI Web Site Is Revamping

NCI is preparing changes to its web site Cancer.gov. The institute will roll out enhancements in phases and engage key stakeholders in the process.

NCI is also expanding its activity in the world of social media, with a small but increasing presence on sites such as YouTube and Twitter. NCI's goal is not only to provide evidence-based information, but also to provide it to the right person

at the right time, in the most appropriate language and format.

The institute is inviting advocacy organizations, NCI-designated cancer centers, NCI-supported programs, extramural researchers, health care professionals and the public to provide their thoughts on how Cancer.gov can become a more effective communication tool.

Your thoughts about Cancer.gov can be submitted through an online forum at <http://cancergov.ideascale.com>. The dialogue will be open until Mar. 31. After that date, a new section established on Cancer.gov will provide updates on progress and program milestones for the site's evolution.



NIH, Jackson Medical Mall Mark Third Year Of Health Information Collaboration

Dr. Aaron Shirley's office is filled with mementos, pictures of famous people he has met and worked with, certificates and plaques on the wall documenting his more than half century of service to the people of Mississippi. But the focal point of his office in the Jackson Medical Mall is the replica of an old bus on the center of a bookshelf.

In 1965, Shirley was the first African-American physician to undertake a pediatric residency at the University of Mississippi. The bus on his bookshelf recalls his childhood memories, symbolizes the civil rights movement and calls to mind the progress Jackson and its citizens have witnessed since his youth.

Shirley devoted much of his practice to improving the health of rural and urban residents of Mississippi, establishing a comprehensive school-based clinic for area teens. In 1995, he joined with several other Jackson leaders to transform an abandoned shopping mall into a community facility—the Jackson Medical Mall—that now provides health care for thousands of people in central Mississippi. Along with housing medical offices, the medical mall encompasses Jackson State University's College of Public Service, the Aaron Shirley Public Health Complex and University of Mississippi medical offices that include the Jackson Heart Study supported by NHLBI.

Three years ago, NIH joined with the medical mall to establish a center where area residents could gain easy access to NIH health information. The center includes materials on such topics as vision health, cancer, heart disease, dental care, diabetes and sudden infant death syndrome. It provides a vehicle to disseminate accurate, up-to-date health information to the more than 165,000 people, mostly patients, who come to the Jackson Medical Mall every year. About 50,000 of these people come to the mall from counties throughout the state; the facility is not only a health resource to people in the local area, but also state-wide.

To mark the start of the third year of this collaboration, Jackson residents joined with NIH staff to conduct a series of four community health forums and four continuing medical education forums. The Jackson/NIH team identified health literacy, diabetes and mental health, along with heart disease and stroke, as health issues important to the residents of Mississippi.

Called the Aaron Shirley Community Forums, the events were held in the Delta city of Clarks-

dale, the gulf coast cities Gulfport and Biloxi and the capital city, Jackson. NICHD deputy director Dr. Yvonne Maddox spoke at each forum and invited subject area experts from across NIH to present current research and program activities addressing the specific health issues.

"NIH supports researchers in Mississippi and in every other state," Maddox said at the initial forum. "These community meetings, where we have a real dialogue, are an important way to involve citizens in research and help everyone benefit from the advances researchers are making."



Marking year 3 of a successful collaboration are (from l) Dr. Warren Jones, director, Mississippi Institute for Improvement of Geographical Minority Health, Mississippi Medical Center; Dr. Aaron Shirley, chair of the board of the Jackson Medical Mall Foundation; Dr. Yvonne Maddox, NICHD deputy director; and Dr. Primus Wheeler, executive director, Jackson Medical Mall Foundation.

Conference Examines Impact of Military Service On Families, Caregivers

The second annual Trauma Spectrum Disorders Conference was held at NIH recently and examined the needs of families and caregivers in support of military and veterans with trauma spectrum disorders. Trauma spectrum disorders are injuries and illnesses that occur as a result of combat or an unexpected traumatic event and cover a broad range of traumatic brain injury and psychological health issues.

The Office of Research on Women's Health brought together researchers and practitioners from the Department of Defense, the Department of Veterans Affairs as well as several NIH institutes and centers and HHS offices and agencies. The goal was to provide a forum to examine evidence-based science relative to family functioning, care giving and child and adolescent development in the context of trauma.

"The conference provided a unique opportunity to showcase what science can offer to the military and civilian practice and caregiver worlds," said Dr. Vivian Pinn, ORWH director. "We believe that civilian and military scientists, clinicians and caregivers together can bring about a collaborative synergy that can improve both the research about and clinical care of those affected by post-traumatic stress disorder and traumatic brain injury."

Patricia Shinseki, wife of Secretary of Veterans Affairs Eric Shinseki and a member of the board of Military Child Education Coalition, delivered the keynote address, describing her personal experience as a military spouse. She gave voice to the challenges that military families face in raising resilient children in the face of multiple deployments.

A videocast is available at <http://videocast.nih.gov/Summary.asp?File=15502>.



Patricia Shinseki

URBAN VIOLENCE

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Rich met with audience members after his talk for a further exchange of views.

PHOTOS: MICHAEL SPENCER

Rich, a physician, is also director of both the Center for Nonviolence and Social Justice and the Center for Academic Public Health Practice at Drexel. He's won a MacArthur Foundation grant, or "genius award," for his innovative work in the area of understanding and preventing traumatic violence in inner-city youth and has been awarded funding from NIMH as well as the CDC. He has also recently published a book, *Wrong Place, Wrong Time: Trauma and Violence in the Lives of Young Black Men*.

Trained in internal medicine, he first began seeing the effect of violence on the youth of Boston, the city in which he completed his residency and the place where he first began meeting with young victims of gunshots and stabbings to learn why the cycle of violence seemed to perpetuate itself.

"Almost inevitably, after I had sat with them for an hour or so hearing their story, the young men would turn to me and say, 'Well, Doc, I guess I was in the wrong place at the wrong time,'" Rich said.

These kinds of statements made him and his colleagues wonder if the victims were covering for their own bad behavior.

"We somehow assumed in many ways that young black men in particular didn't just get shot, they got themselves shot," he said. But this sentiment began to change when he reviewed the stories and realized there were common trends that trapped these men in a pattern of cyclical violence and repeat traumatic injury, and it wasn't just coincidence.

By listening to the stories, Rich hopes, the medical community can begin to "think about what the wrong place and the wrong time really are and how we can create a right and safe space for these young people."

Early in his career, he remembers seeing few young black men in primary care but plenty rotating in and out of the emergency ward. Wanting to change that dynamic, he founded the Young Men's Health Clinic at Boston Medical Center. While this brought some men into a medical setting—some for the first time since they were children—Rich began to learn more about what normal meant for these people and what forces shaped their everyday lives.

He found that not only were four-fifths of them uninsured, but nearly half had experienced violent injury in the past, more than half had wit-

nessed a shooting or a stabbing, nearly half felt harassed by the police and a quarter said they did not feel safe. As a result, they largely mistrusted the police, lived by the code of the street and had few outlets allowing them to break the cycle.

"It made me realize that the issue of trauma and adversity was very much primary in the lives of these young men."

Digging deeper, Rich found that homicides involving black men under the age of 40 accounted for the vast majority of total violent deaths in Philadelphia (where he later moved to work at Drexel) and that other violent actions disproportionately included young black men. Nationally, homicide is the leading cause of death for black men between ages 15 and 24.

"In these communities where we are seeing these young men, they are constantly surrounded by violence," he said.

The trend is compounded by exceptionally high rates of HIV infection, incarceration and unemployment, as well as a continuing thread of discrimination by police and hiring managers, which further complicates the lives of young men of color.

Beyond the weight of the human tragedy of those statistics, Rich found that the cost of treating violently injured men, as well as the loss of productivity, totaled in excess of \$37 billion a year, making violent injury a major strain on the nation's economy.


Rich then knew he had to record the narratives of these young men and analyze them to see what recurring violence and social trauma were doing to them and how he might be able to help. He played clips of the stories, including one from a man who had been shot in the head twice and lived to tell the tale.

Through interviews with men who had experienced at least one violent injury, he found that 65 percent met the full criteria for post-traumatic stress disorder. This information was a turning point for Rich and gave him insight into how—if the men were sent back home with no intervention strategies—it was likely that the men might be seen again in the emergency room.

This insight gave an emergency department-based intervention program—similar to the clinic Rich started at Boston Medical Center—a unique opportunity to step in. In the Healing Hurt People program at Hahnemann/Drexel Hospital in Philadelphia, a survivor of street violence serves as its primary liaison to patients who show up in the ER. The program, directed by Dr. Theodore Corbin, an emergency medicine physi-

cian, is able to intervene with these troubled men, letting them tell their stories and release their trauma and then focusing their energies on more positive coping strategies. Many of those same men now express a desire to shun violence and instead actively challenge themselves to get a job, go to school and stay away from illicit activities.

For Rich and Corbin, this is music to their ears, but it's also just the beginning.

"There's hope, and the hope depends on having a trauma-informed approach that recognizes the experiences of our patients and the experiences of violence," Rich said. "And [it depends on] engaging them in the opportunities that allow them to envision the future." 



OTT Wins Industry Award

NIH's Office of Technology Transfer recently won an award for successfully executing a complex agreement involving 10 separate entities. OTT evaluates, protects, markets, licenses, monitors and manages the wide range of NIH and FDA discoveries, inventions and other intellectual property as mandated by the Federal Technology Transfer Act and related legislation. It oversees patent prosecution and negotiates and monitors licensing agreements. The Licensing Executives Society (U.S. and Canada) gave one of its five annual awards to OTT for its role in coordinating the exclusive licensing agreements for scientific discoveries generated by four ICs (NINDS, NHLBI, NIDDK and the CC) and developed in collaboration with four universities (Loma Linda University, Louisiana State University, University of Alabama and Wake Forest University) to two pharmaceutical firms that will develop new treatments based on the discoveries. Shown above with the award are OTT team members (from l) Richard Rodriguez, director of the Division of Technology



Development and Transfer; Dr. Mark Rohrbach, director of OTT; Steve Ferguson, deputy director of licensing and entrepreneurship; and Charles Duffney, senior advisor for monitoring and enforcement. Fatima Sayyid (l), a senior licensing and patenting manager, was instrumental in coordinating the effort.

For Users on the Go NLM Launches Mobile MedlinePlus

Wondering what the side effects are for your new prescription? Go to Mobile MedlinePlus (<http://m.medlineplus.gov>) while you're waiting for the pharmacist to fill your order.

Consult Mobile MedlinePlus during your Metro ride to work, to read the latest news on diabetes.

Or, instantly look up the symptoms of H1N1 flu if you're at the supermarket and your child's school calls you to tell you he doesn't feel well.

The National Library of Medicine's Mobile Medline Plus builds on NLM's MedlinePlus Internet service, which provides authoritative consumer health information to over 10 million visitors per month. These visitors access MedlinePlus (<http://medlineplus.gov>) from throughout the United States as well many other countries and use desktop computers, laptops and even mobile devices to get there.



The mobile Internet audience is large and growing fast, almost doubling from February 2007 to February 2009. Some experts predict that within the next 5 years, more people will connect to the Internet via mobile devices than via desktop or laptop computers. People use their mobile devices to accomplish a variety of tasks, including finding health information. With this in mind, NLM developed the mobile version of MedlinePlus to bring high-quality health information to users on the go.

"We know that a huge number of people are seeking good health information on the web," noted NLM director Dr. Donald Lindberg. "What better way to reach out to them than by offering this new mobile service, which delivers trustworthy, consumer-friendly information instantly, anywhere?"

Mobile MedlinePlus is available in English and Spanish (<http://m.medlineplus.gov/spanish>) and includes a subset of content from the full web site. It includes summaries for over 800 diseases, wellness topics, the latest health news, an illustrated medical encyclopedia and information on prescription and over-the-counter medications.

For instance, you could visit the "Talking With Your Doctor" page on Mobile MedlinePlus to learn how to get the most out of your doctor's visit.

Mobile MedlinePlus can also help you when you're trying to choose an over-the-counter cold medicine at the drug store.

And if you're traveling abroad, you can use Mobile MedlinePlus to learn about safe drinking water.

Mobile MedlinePlus puts reliable health information at your fingertips. 

OHR members (from l) Eulania McDowell, Cynthia Bolton and West are among dozens of NIHers participating in Haiti relief efforts across the agency.



HAITI QUAKE

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in Haiti, primarily on HIV/AIDS and related conditions, supported by a number of NIH institutes and centers including NIAID, NICHD, NIDCR, NIAAA, NIMH, FIC and NCI...Our sincere gratitude goes out to all who are contributing to the relief efforts through donations and volunteer activities to help Haiti respond to this terrible tragedy."

The Commissioned Corps was activated immediately by the assistant secretary for health, and at least two NIHers were deployed the week of Jan. 18—one to Haiti and another to the Sec-

retary's Operations Center to help prepare reports for the President on the status of medical care in the devastated nation.

Updates on conditions by Pape, who was himself injured in the quake, have been posted online at <http://weill.cornell.edu/global-health/>.

In the earliest reports, Pape described structural damage sustained by the facility's downtown site, which is located in central Port-au-Prince, near the epicenter of the quake. Clinic walls fell onto a gas reservoir, leaving the facility without fuel

to operate its generators. Most buildings were deemed unsafe to occupy. In addition, several staffers and family members were not immediately accounted for, including Maryse Thimothée, head of GHESKIO's bacteriology lab. It was later learned that she had been killed when her home collapsed. Three other staffers also have been reported dead.

Recent Updates Uplifting

Two days after the quake, however, Haiti's resiliency was clearly in evidence: GHESKIO was back up and running, providing much-needed water and shelter to several thousand people, including patients and other survivors in the vicinity. A report about the facility's quick transition from requiring help to offering it can be found online at www.fic.nih.gov/news/haiti.htm.

The loss of lives—some official counts report more than 212,000 people—was epic. In addition, severe threat of disease via infection, starvation, exposure and general unsanitary conditions, as well as the mental and emotional aftermath, are difficult to quantify. In the nearly 2 months since the tragedy, recovery has steadily progressed.

"The first phase of the disaster in Haiti is now ending, with hundreds of thousands of people having died from trauma," according to an article by Pape and associates published in the Feb. 12 issue of the *New England Journal of Medicine*. "But the second phase promises to be as cruel as the first, with deaths due to exposure, starvation and infectious diseases. Millions of Haitians are homeless and have no food, clean water, sanitation or primary health care. And the rainy season is coming.

"The Port-au-Prince clinic of [GHESKIO] has become a refugee camp and an emergency field hospital, even as we continue to run our clinic for thousands of patients with AIDS or tuberculosis. Despite our own losses (four GHESKIO staff members died, four were critically injured, 28 lost an immediate family member and 90 are homeless), we continue to provide medical care around the clock, working with international partners."

NIH'ers Rally Around Relief Efforts

In response to the crisis, several relief efforts led independently by individuals as well as small groups sprang to life across NIH.

"Anything that occurs in Haiti is of personal interest to me because I am of Haitian descent," said Rachel N. West of NIH's Office of Human Resources. "Hearing that Haiti suffered this terrible earthquake literally broke my heart...Seeing the horrific images on TV, I knew that the NIH as a community could do something to help. I wanted to do something for Haiti.

"With all the worry and anxiety I was feeling for my family in Haiti," she noted, "I had to combat the helplessness I was feeling. Secretary [Kathleen] Sebelius issued an email to all HHS employees about relief efforts in Haiti

NLM Launches Page on Earthquake Health-Related Resources

The National Library of Medicine has launched a new web page of Haiti earthquake health information, which gathers links about the situation from both government agencies and non-governmental organizations. There is also a section with Haitian Creole and French-language materials. Links to background information on earthquakes and subsequent health issues such as public health assessments and emergency surgical care are included as well.

The page <http://disasterinfo.nlm.nih.gov/dimrc/haitiearthquake.html> will continue to expand and will add a section on hazards of concrete dust and other airborne particulates from collapsed buildings and subsequent clean-up activities. You can also send comments and suggestions about additional health information content to tehip@tehl.nlm.nih.gov. The information is compiled by the Disaster Information Management Research Center, Specialized Information Services, NLM.



Bolton shows boxes stacked high with toiletries prepared for transport to Haiti.

and encouraged us to do what we could to help. Upon receiving that email, I asked our Client Services Division director, Valerie Gill, if we could start an internal donation drive for Haiti. She was very supportive of the idea and I began coordinating the effort with members of her immediate staff and solicited volunteers. I created flyers and researched organizations that were on the ground doing work in Haiti and helping earthquake victims."

The group joined with International Relief and Development, Inc. (IRD), an organization founded in 1998 that has provided "over \$1.25 billion in humanitarian assistance to vulnerable populations around the world," according to its web site.

West reports that IRD has received more than \$200,000 in cash donations since Jan. 13. The money will be used immediately to purchase basic humanitarian aid for the people of Haiti and help cover delivery costs of items to Port-au-Prince. [To read more about IRD, go to www.ird.org.]

"The CSD Haitian Relief Donation Drive held for 2 weeks [Jan. 25 to Feb. 5] was a huge success," West said. "We collected a little more than 50 boxes of medical supplies and toiletries. The first week, we packed and collected approximately 30 boxes. The generosity has been overwhelming."

Still Time to Help

Another relief effort is being spearheaded by Maxime Debrosse, a medical student currently doing research in NICHD's Laboratory of Molecular Growth Regulation.

"On Jan. 12, I turned on the TV set to the unimaginable—a 7.3 magnitude earthquake had just hit Haiti," he said. "I couldn't reach my family in Port-au-Prince. When I finally did, I learned that my uncle was missing. For-

tunately, he was found alive 2 days later, but it became clear to me that, in 36 seconds, countless Haitian lives were changed forever, for the worse. The following day, pondering upon ways to help minimize a tragic trend, I created a fundraising page on the Mercy Corps web site, through which many people generously donated."

Later, he and several research fellows teamed up with the NIH R&W Association to organize a three-part—raffle, auction and bar social—event that will be held on Mar. 12-13.

On staff since September 2009 as a Howard Hughes Medical Institute research scholar, Debrosse said, "Despite laudable rescue efforts, there remains a shortage of food, clean water and medical supplies. In the face of that heart-wrenching reality, financial donations are the best approach."

So far, the web site alone has raised more than \$2,500, with an ambitious goal of \$50,000 after all events are tallied. Debrosse suggests three ways people can help:

▲ Donate money to the Mercy Corps site at www.mercycorps.org/fundraising/debrosse1, or to the Red Cross, Partners in Health, CARE, Yele Haiti or UNICEF.

▲ Participate in the raffle. Tickets are \$5 each, or 3 for \$10. Grand prize: a trip to Bear Mountain Creek Resort, Berks County, Pa. (Pocono Mountains). Drawing to be held Mar. 13 at Hard Times Café. All proceeds benefit Haiti earthquake survivors.

▲ Attend upcoming Bethesda fundraising events. Bar night at Blackfinn Restaurant, Friday, Mar. 12. Suggested donation at the door, \$5. Auction at Hard Times Café, Saturday, Mar. 13. For event information or raffle tickets, email debrosse1@gmail.com.

For more detailed information on NIH and HHS Haiti relief efforts, visit www.nih.gov/news/haitiearthquake.htm. ①

Edwards Named Director of NCCAM Extramural Research

The National Center for Complementary and Alternative Medicine has appointed Dr. Emmeline Edwards as new director of its Division of Extramural Research. A specialist in neural mechanisms of complex behaviors, she will oversee NCCAM-funded research and training programs and provide guidance on research interests, priorities and funding. She will also coordinate research efforts with other institutes and centers.

Prior to joining NCCAM, Edwards was deputy director of the extramural program at NINDS, where she provided oversight to all scientific and administrative aspects of research programs. Before that she was program director for systems and cognitive neuroscience at NINDS.

Before joining NIH, Edwards was program director for behavioral neuroscience at the National Science Foundation and was NSF representative to the Human Brain Project. She was also a faculty member in the pharmacology and neuroscience programs at the University of Maryland.

"Her background and her proven expertise in the oversight of basic and applied research will prove invaluable to NCCAM," said NCCAM director Dr. Josephine Briggs.

Edwards earned her B.A. from the College of New Rochelle and her M.S. and Ph.D. from Fordham University.



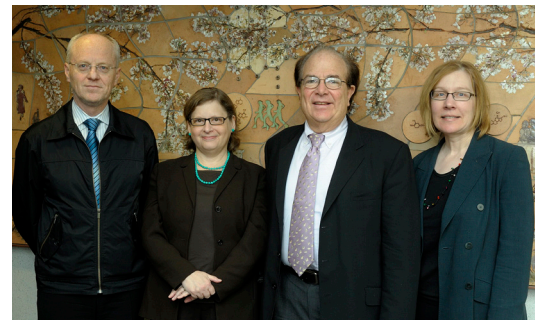
HEADACHE

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Above:

STEP forum headache experts include (from l) Goadsby of the University of California, San Francisco; Dr. Ann Scher of the Uniformed Services University of the Health Sciences; Dr. Stephen Silberstein, director of Thomas Jefferson University's Headache Center; and Dr. Elizabeth Loder of Harvard Medical School and Brigham and Women's/Faulkner Hospitals.

PHOTOS: MICHAEL SPENCER



will spend one-tenth of one penny on each American [who gets] migraine each day...making headache research perhaps a little under-resourced."

The forum focused on headaches that are primary (without any underlying disorder) rather than secondary (produced by something else).

The vast majority of people get headaches at least occasionally, said epidemiologist Dr. Ann Scher of the Uniformed Services University of the Health Sciences.

"The most common types of primary headaches are tension-type headache, migraine and chronic daily headache," said Scher.

Tension-type headache, by definition, is less disabling than migraine headache. As for chronic daily headache, "it's prevalent in about 3 to 4 percent of adults, 2 percent of children/adolescents and is about twice as common in women as men."

Migraine typically affects only one side of the head, although not always. It is more than a headache and may include nausea and vomiting as well as weakness and sensitivity to light and sound. It may also be preceded by an aura: transient neurological symptoms that are usually visual, such as seeing stars or spots or partial loss of vision. Less common aura symptoms include transient numbness, motor or speech problems. About one-third of migraine sufferers experience an aura at least occasionally. Migraine attacks, which can be episodic or chronic, can last up to 72 hours.

"Migraine is the most common neurological disorder in both women and men," Scher said.

There are almost 30 million migraine sufferers in the U.S., but up to 50 percent of migraineurs (folks who get migraines) do not consult physicians. Yet the 1997 Global Burden of Disease Study ranked severe migraine in the same class as active psychosis and quadriplegia (paralysis of the arms and legs).

Another study showed \$1 billion per year in direct costs (physician visits, etc.) and \$13 billion in indirect costs, as in missed work and "presentee-ism," when you come to work but can't perform well.

Dr. Elizabeth Loder of Harvard Medical School and Brigham and Women's/Faulkner Hospitals reviewed differential diagnosis.

Doctors diagnose migraine by a physical examination, patterns of symptoms and a thorough patient history to distinguish it from other headaches, whether tension, cluster or "primary stabbing headache."

She said that "as clinicians, we have very poor treatment therapies for most of these people; it's an area of significant unmet need." Migraine is often refractory—stubbornly resistant—to treatment.

"Current treatments work well for people who have occasional headaches," she said, "but the treatments we have for people with daily or almost daily headache problems are limited and for many people are not especially effective."

Goadsby, who heads UCSF's headache group, returned to discuss migraine pathophysiology (changes in normal function).

"While it's common to have a first degree relative with migraine," he said, "the genetics [have] yet to be worked out..."

"Migraine is a dreadful phenomenon," he said, "and one of the greatest unmet needs is prevention."

Dr. Stephen Silberstein, director of Thomas Jefferson University's Headache Center, spoke of integrated therapies: medications, both prescription and over the counter, as well as quiet, rest, cold compresses and behavioral interventions such as stress management.

He suggested a "headache calendar" to help patients identify and remove triggers such as hormonal factors, stress and certain foods.

There is no cure for migraines.

"Depakote—we're talking about the best drug we have—is barely able to break the 50 percent barrier," he said.

"Migraine may be progressive [going from bad to worse] within an individual attack and within the disorder." There is nothing to be gained by delaying treatment. "If you see a patient with migraine, treat early," he advised.

The good news, he said, is that "some preventive meds are coming down the pike." 🗞

Smith To Head NIGMS Branch

Dr. Ward Smith is the new chief of the Structural Genomics and Proteomics Technology Branch in the NIGMS Division of Cell Biology and Biophysics (CBB). The branch supports studies that take a genomics or computational approach to determining protein structure and function.



Before joining the branch as a program director in 2007, Smith was a protein crystallographer at Argonne National Laboratory, where his research focused on the structure and function of biological macromolecules and structure-based drug design.

In addition to being selected to serve as branch chief, Smith was also recently named director of the NIGMS Protein Structure Initiative (PSI), a network of research centers that are making protein structure determination faster, easier, cheaper and more useful to a broad range of scientists.

“Dr. Smith brings a fresh perspective because of his industrial background and his strong expertise in x-ray crystallography and synchrotron technology,” said CBB director Dr. Catherine Lewis. “His in-depth knowledge of structural biology will serve him well in his dual role of leading the branch and directing one of its major programs, the PSI.”

Smith earned a B.S. in chemistry from the University of Illinois at Urbana-Champaign and a Ph.D. in biological chemistry from the University of Michigan. He conducted postdoctoral research at the University of California, Los Angeles.



This scale model shows one angle of the 28-foot by 10-foot mural, whose seven sections move and change throughout a new play illustrating the impact of Darwin.

Play Celebrates Darwin's Impact

Later this month, the Bethesda Theatre will host the world premiere of *From Orchids to Octopi: An Evolutionary Love Story*. The play was commissioned by NIH as part of the continuing celebration of Darwin's 200th birthday known as Evolution Revolution.

Following the Bethesda shows, *From Orchids to Octopi* will be performed in Cambridge, Mass., and at locations around the country.

The play tells the story of an artistic couple who find themselves pregnant unexpectedly and are simultaneously pulled apart by compelling, but conflicting, professional opportunities.

As the couple's plans evolve, ordinary experiences and “pregnancy hallucinations” converge to give them—and the audience—a deeper understanding of natural selection.

Making guest appearances are the Darwin family, a carnival barker, dinosaurs, tiktaalik (the “missing link” between fish and land animals), tuberculosis and a two-headed cow named Buttercup. These fanciful characters help audiences understand a number of scientific concepts, including random mutation, competition for resources, adaptation, speciation, sexual selection, lactose tolerance, drug resistance and extinction.

The script also contains historical quotes from Darwin and his contemporaries.

Central to the play is an evolving mural created by a professional muralist. Made up of seven sections that move and change as the play progresses, the mural reflects the characters' growing appreciation of evolution and displays in vivid colors the biodiversity of our world.

From Orchids to Octopi was written by award-winning playwright Melinda Lopez and produced by the Catalyst Collaborative at MIT (CC@MIT) in consultation with scientists from MIT and Harvard.

The CC@MIT is a collaboration between MIT and the Underground Railway Theater. Its mission is to create and present plays that deepen public understanding of science while providing a unique artistic and emotional experience. Eleven institutes and centers contributed to the development of the play.

Show times are on Monday, Mar. 22 and Tuesday, Mar. 23 at 10 a.m. and 7:30 p.m. each day. Tickets cost \$15 at the door or \$15 plus fees through Ticketmaster in advance. The 10 a.m. shows are free for school groups. Following the evening performances, audience members are invited to join a conversation with scientific experts and cast members.

The Bethesda Theatre is located within walking distance of NIH at 7719 Wisconsin Ave. Parking and accessibility information is available at www.bethesda-theatre.com/planyourvisit.html. For more information, contact Alisa Machalek at (301) 496-7301 or alisa.machalek@nih.gov.

Stillbirths in Developing Countries Drop Dramatically After Newborn-Care Training

The rate of stillbirths in rural areas of six developing countries fell more than 30 percent following a basic training program in newborn care for birth attendants, according to a study funded by the National Institute of Child Health and Human Development and the Bill and Melinda Gates Foundation. The study, which tracked more than 120,000 births, tested the efficacy of a 3-day regimen that covers basic newborn-care techniques, the importance of early breastfeeding, how to keep infants warm and dry and signs of serious health problems. "These findings suggest that a low-cost instructional regimen for birth attendants can be effective in reducing stillbirths in parts

of the world where most births are not attended by a physician," said Dr. Alan Guttmacher, acting NICHD director. The research was conducted at sites in Argentina, the Democratic Republic of Congo, Guatemala, India, Pakistan and Zambia. Results appeared in the Feb. 18 issue of the *New England Journal of Medicine*.

Researchers Discover Genes for Stuttering

Stuttering may be the result of a glitch in the day-to-day process by which cellular components in key regions of the brain are broken down and recycled, says a study in the Feb. 10 Online First issue of the *New England Journal of Medicine*. Stuttering is a speech disorder in which a person repeats or prolongs sounds, syllables or words, disrupting the normal flow of speech. The study, led by researchers at the National Institute on Deafness and Other Communication Disorders, has identified three genes as a source of stuttering in volunteers in Pakistan, the United States and England. Mutations in two of the genes have already been implicated in other rare metabolic disorders also involved in cell recycling, while mutations in a third, closely related, gene have now been shown to be associated for the first time with a disorder in humans.

Scientists Map Genetic Regulatory Elements For the Heart

Scientists have devised a new computational model that can be used to reveal genetic regula-

tory elements responsible for development of the human heart and maintenance of its function. Although the teams focused on the heart, the method they developed is broadly applicable to other tissues and was successfully used to identify regulatory elements for cells of the limbs and brain. Cataloging these regulatory sequences may improve understanding of diseases and lays the groundwork for improved medical treatments. Conducted by scientists at NLM's National Center for Biotechnology Information and the University of Chicago, the research is published in the March 2010 issue of *Genome Research*.

All cells of the human body share the same set of 46 chromosomes with approximately 23,000 genes, but only specific subsets of those genes will be activated in individual organs and tissues. Cells in the heart and other tissues switch genes on and off in different cells and at different points in their life spans by using regulatory elements, segments of DNA that control gene expression and are scattered throughout the sequence of 3 billion letters of the human genome.

The computational model is a tool to find those switches within vast stretches of DNA. Scientists developed a machine-learning approach to accurately detect signatures of heart regulatory elements. The approach involved the use of algorithms that enabled computers to recognize complex patterns in the data and to improve the accuracy of recognition by automatically adapting the computational methods to the experimental data.

WHI Study Data Confirm Short-Term Heart Disease Risks of Hormone Therapy

New analyses from the Women's Health Initiative confirm that combination hormone therapy increases the risk of heart disease in healthy postmenopausal women. Researchers report a trend toward an increased risk of heart disease during the first 2 years of hormone therapy among women who began therapy within 10 years of menopause and a more marked elevation of risk among women who began hormone therapy more than 10 years after menopause. Analyses indicate that overall a woman's risk of heart disease more than doubles within the first 2 years of taking combination HT. Combination hormone therapy includes progestin in combination with estrogen. The study is in the Feb. 16 *Annals of Internal Medicine*. The WHI is sponsored by the National Heart, Lung, and Blood Institute. —compiled by Carla Garnett



The rate of stillbirth deaths dropped dramatically following a basic training program in newborn care, according to a study jointly funded by NICHD and the Gates Foundation.



The phone numbers for more information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

Weight Study Needs Healthy Volunteers

Healthy volunteers are needed for a study investigating the reasons why some individuals maintain their weight. The study looks at the response to different diets in relation to metabolism. Consider participating in this study if you are 30-50 years of age, have a body mass index (BMI) between 18.5-23.0, and have a stable weight (less than 2 percent change in the last 6 months). All study-related tests and meals are offered at no cost. Compensation is provided. Refer to study 09-DK-0238.

Individuals with Kidney Disease Needed

Individuals with the kidney disease idiopathic membranous nephropathy are needed. NIDDK is conducting a clinical research study to evaluate the safety and effectiveness of a combination of rituximab plus cyclosporine in the treatment of idiopathic membranous nephropathy. Studies are conducted at the Clinical Center. There is no cost for study-related medications or tests. Must be 18 or older. Transportation assistance may be provided. Refer to study 09-DK-0223.

Women's Health Studies Seek Healthy Volunteers

Healthy women ages 18-65 are invited to participate in outpatient research studies. Compensation is provided. Call (301) 496-9576 and refer to protocols 81-M-0126 and 88-M-0131 and 03-M-0138.

Neck Pain Study

NIH's rehabilitation medicine department is seeking individuals, with or without neck pain, who are between the ages of 18-65 to participate in a 3-month natural history study of neck pain. Participation includes a comprehensive cervical musculoskeletal examination without compensation and 1-hour monthly visits. Send email to neckpainstudy@gmail.com or call (301) 451-7514. Refer to study 02-CC-0245.

Healthy Smokers Needed

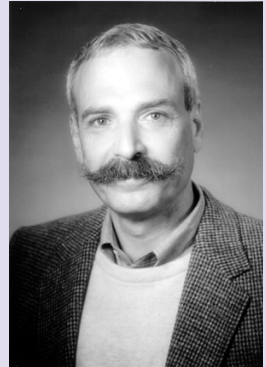
The Mood & Anxiety Disorders Program, NIMH, is looking for healthy volunteers with no current or history of psychiatric illness, between the ages of 18 and 65, to participate in a multitude of studies. Studies may include: PET and/or MRI scans, psychological interview and neuropsychological testing, depending on the study you choose to participate in. Call (301) 435-8982 if you would like more information.

Postpartum Depression Research Studies

Women ages 18-45 who struggle with postpartum depression or who had PPD in the past are invited to participate in outpatient research studies. There is no cost for participation. Compensation may be provided. Call (301) 496-9576 and refer to study 03-M-0138.

Ex NIH'er Skolnick Joins NIDA to Lead Drug Discovery

Dr. Phil Skolnick has been appointed director of NIDA's Division of Pharmacotherapies and Medical Consequences of Drug Abuse.



He was most recently a research professor of psychiatry at New York University Langone Medical Center. He also served as chief scientific officer at DOV Pharmaceutical, Inc., from 2001-2009. Under his leadership, DOV discovered and developed novel reuptake inhibitor platforms, including the first triple (norepinephrine, serotonin and dopamine) reuptake inhibitor tested in humans. At NIDA, he will lead a team that stimulates and conducts all phases of medications development from synthesis and screening of potential drug entities to preparing submissions for New Drug Applications.

"We are delighted to have Dr. Skolnick join our team of scientists looking for solutions to the management of drug addiction," said NIDA director Dr. Nora Volkow. "His many remarkable years of innovation and leadership in both public and private research arenas will strengthen our complex medications development process and enhance our search for pharmacotherapeutic and immunological treatment agents."

Skolnick's appointment marks a return to campus. He first joined NIH in 1972 as a staff fellow under Dr. John W. Daly in the National Institute of Arthritis, Metabolism and Digestive Diseases. After a brief stint as a senior investigator at the National Institute on Alcohol Abuse and Alcoholism, he returned to NIAMDD in 1978. In 1983, he became chief of the section on neurobiology, and in 1986, chief of the Laboratory of Neuroscience. Skolnick retired from government service in 1997 when he accepted a position as a fellow in neuroscience at Eli Lilly.

"I am delighted to return to the NIH community, which was a wonderful professional home for 25 years," said Skolnick. "My new position at NIDA will enable me to take what I have learned in the private sector about medications development and apply it to the challenging field of drug abuse and addiction."



OEODM Hosts Future Scientists, Calls for Scientist Volunteers

By Darlene Pearson

If you were in Bldg. 45 on Jan. 27, you probably wondered what all the cheering was about. NIH's Office of Equal Opportunity and Diversity Management hosted 55 6th grade students at the NIH Visitor Center and Nobel Laureate Exhibit Hall, where they had an opportunity to dissect a sheep's heart and a stingray. The center's Sharon Greenwell led the lab session.

"It was a great learning experience for the students—you could hear the roar of excitement and enthusiasm throughout the halls of the Natcher Conference Center," noted an OEODM staffer.

In 2008, OEODM began a partnership with Whittier Elementary School in Washington, D.C. OEODM Director Lawrence Self initiated the outreach in an effort to help build the pipeline of potential biomedical researchers. He believes a "spark of interest in science

begins at an early age." The program has proven to be a substantive and beneficial partnership in which Whittier students are exposed to the adventure of science and can envision a career in scientific research.

A substantial part of the outreach program is dedicated to interactive learning sessions and enhancement activities. Students can gain insight into the exciting applications of science right in their own classroom or in a lab hosted by an NIH scientist.

The program kicked off in 2010 with Searching for the Allergen, a hands-on demonstration of the importance of proper patient identification and sample collection.

Coming up next, Dr. David Vannier of NIH's Office of Science Education will visit Whittier to conduct a teachers workshop on supplemental science education materials and how to use them.

If you are a scientist interested in working with young students, call (301) 496-1552.

Above:

Students from D.C.'s Whittier Elementary School prepare to work in a demo lab in the Natcher Bldg.

Below:

At left, an organ dissection gets under way.

At right, Sharon Greenwell (c) of NIH's Visitor Center and Nobel Laureate Exhibition Hall conducts a lab session with budding young scientists.

PHOTOS: DARLENE PEARSON

